PhD position polygenic adaptation and pleiotropy

We are looking for a PhD student in the group of Dr. Markus Stetter (Institute for Plant Sciences) for a collaborative project with the group of Prof. Joachim Krug (Institute for Biological Physics) on the roles of polygenic adaptation and pleiotropy in the evolution of plant populations under changing environments. The project combines forward-in-time simulations, and the analysis of large-scale empirical data from different plant species, and is part of the new Collaborative Research Center TRR341 "Plant Ecological Genetics" funded by Deutsche Forschungsgemeinschaft (DFG). The focus of the project is the joint adjustment of multiple phenotypic traits, so-called adaptive trait syndromes, which play an important role in ecological specialization.

The student will employ forward-in-time simulations to study the adaptation of single and multiple traits under different environmental scenarios. Building up on previous research (Stetter et al 2018) you will apply these models to explicit plant populations and compare them to empirical data. The project is suitable for applicants with a background in biology, population genetics, quantitative genetics or mathematics.

What we expect and what we offer: We are looking for highly motivated individuals with a basic knowledge in population and quantitative genetics, good computational skills, and a degree in biology, physics, mathematics, computer science or related fields. Previous experience with population genetic simulations is an asset but not a requirement. Successful candidates will be integrated into the newly established Graduate School in Ecological Genetics (GEcoGen). Salary will be based on 65% of the level E13 of the German public service salary scale (TV-L). The project can start as soon as we have found a suitable candidate.

How to apply: Applications including a CV, a letter of motivation, and names and contact information of two references should be submitted as a single PDF via email to Markus Stetter (m.stetter@uni-koeln.de) with "PhD TRR341" in the subject. Reviewing of applicants with start on September 1st and remain open unit the position is filled. For further information about the project and the consortium please contact Markus Stetter.